

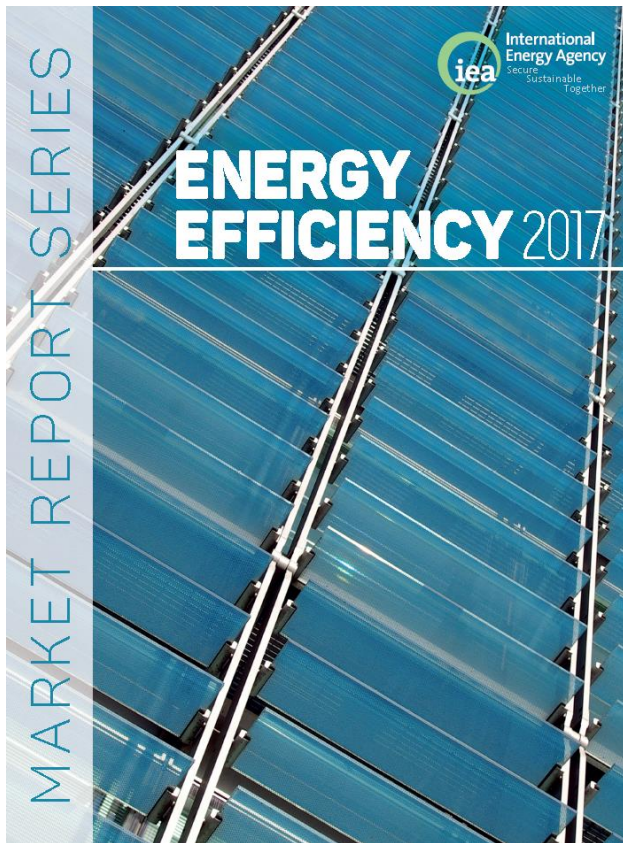


Energy Efficiency 2017

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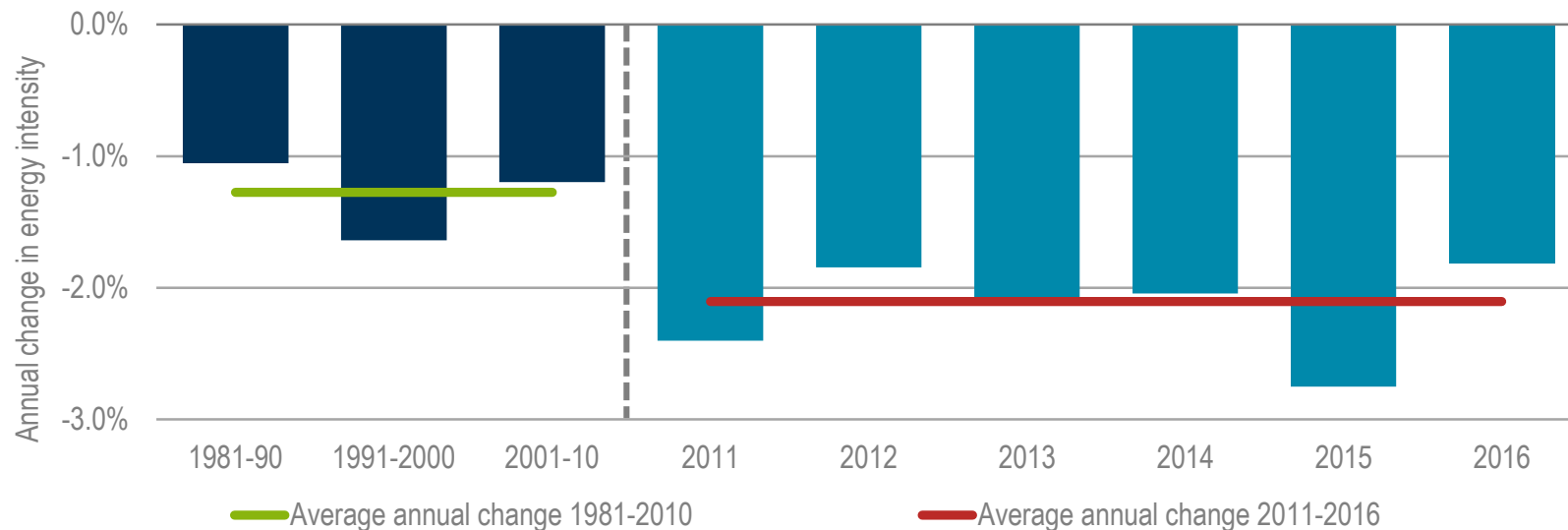
- Energy efficiency trends and indicators
- Drivers of energy efficiency gains
- Energy efficiency in key sectors
- Energy efficiency investment, finance and markets
- Free download at iea.org/efficiency

2016 confirmed the recent step up in global energy efficiency gains

This is generating economic, social and environmental benefits

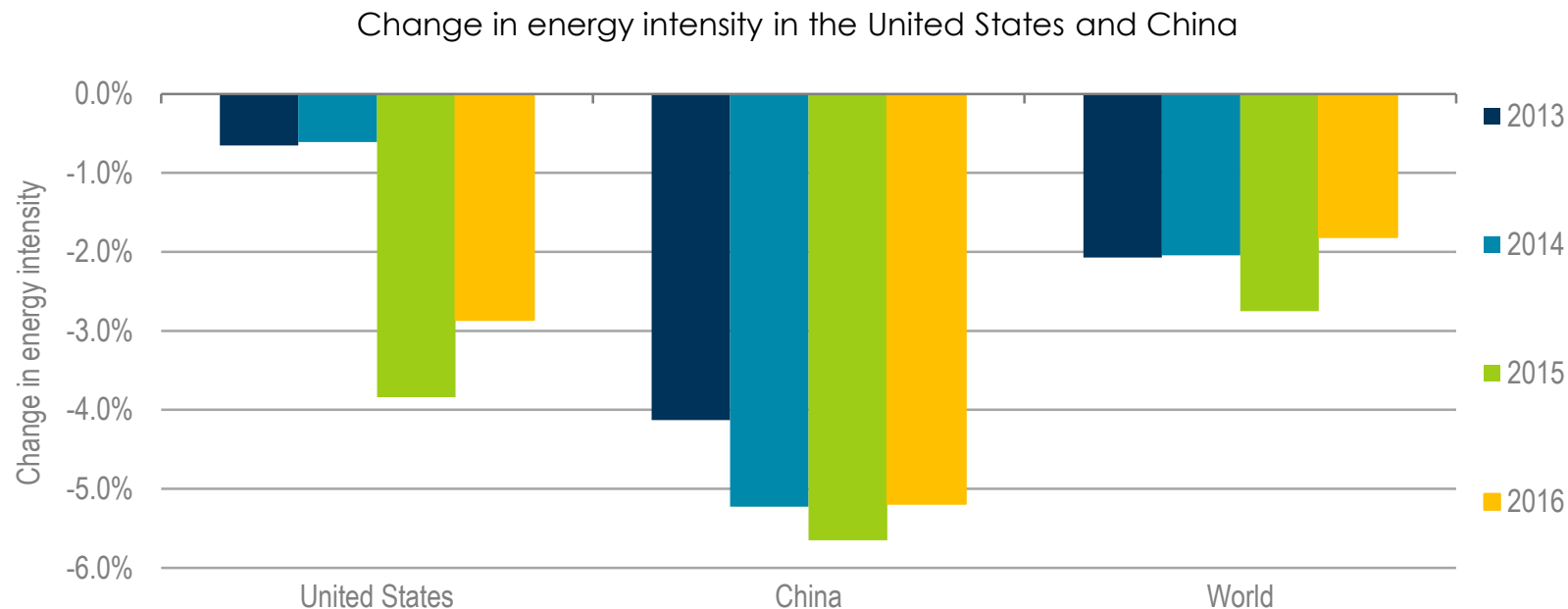
But stronger policy implementation is essential

Changes in global energy intensity (energy per unit of GDP)



This decade has seen intensity improvement rates at almost double the historic average, suggesting that the world has entered a new era of faster intensity gains.

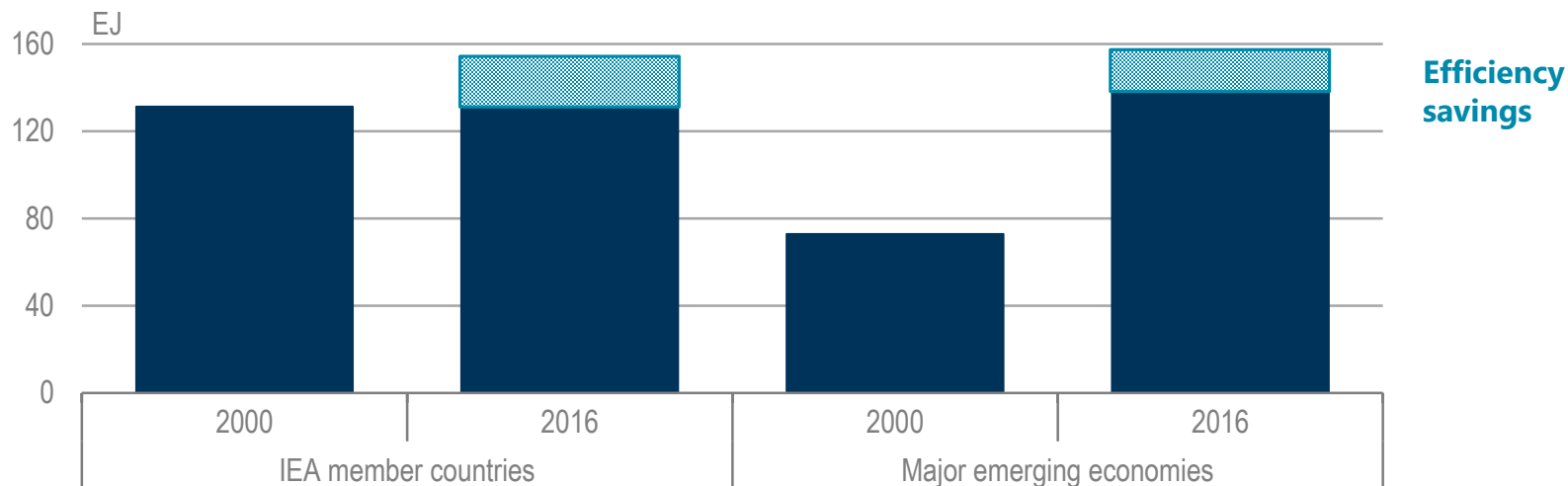
Trends in energy intensity in the United States and China



US and Chinese energy intensity improvements have been above the global average in 2015 and 2016.

Energy efficiency has reduced global energy use

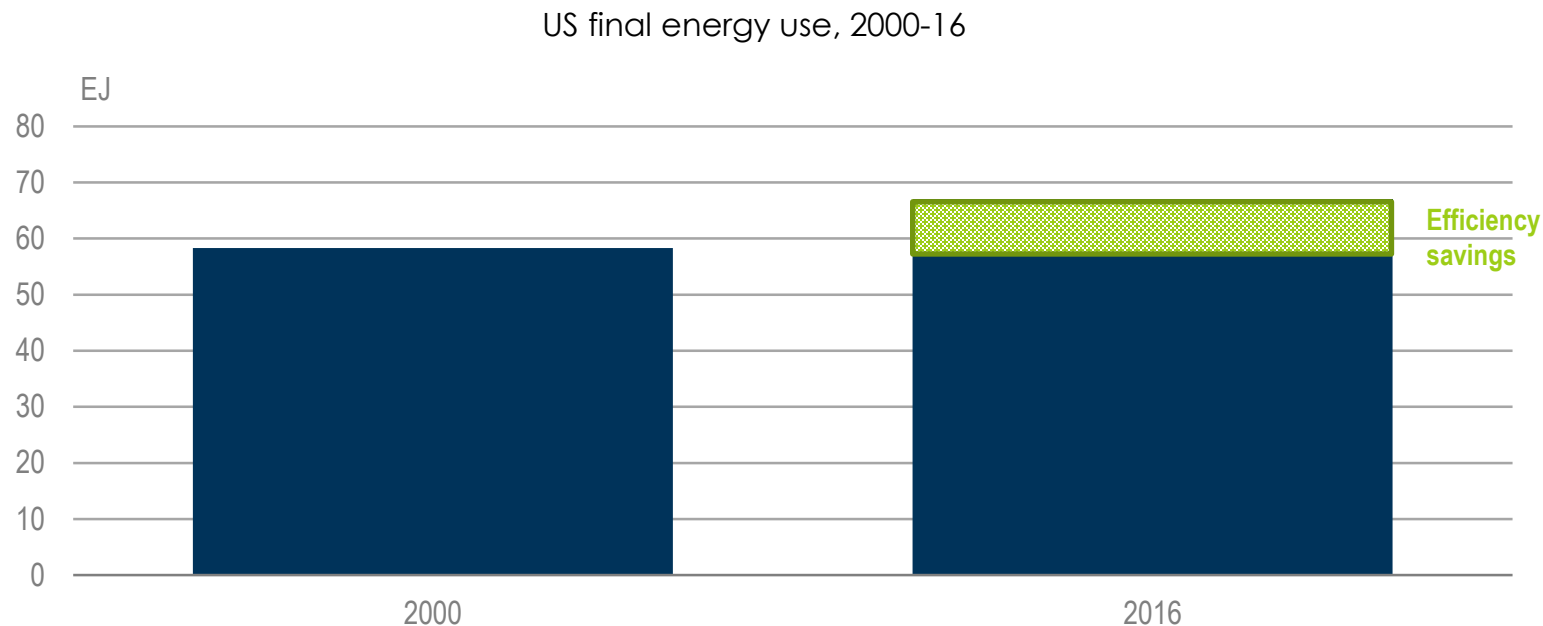
Energy use with and without energy savings from efficiency improvements since 2000



Major emerging economies are the People's Republic of China, India, Mexico, Brazil, Indonesia and the Russian Federation

Efficiency in IEA member countries has reduced energy use to levels not seen since the 1990s. Energy efficiency in the six major emerging economies avoided 13% more energy use.

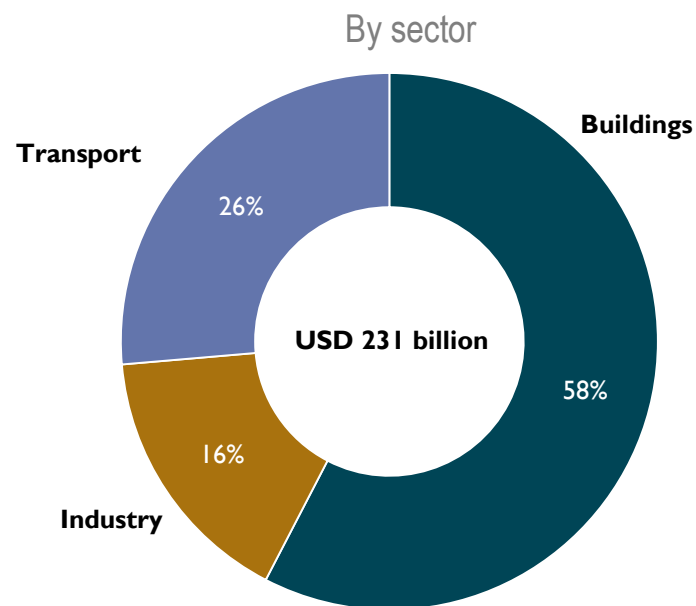
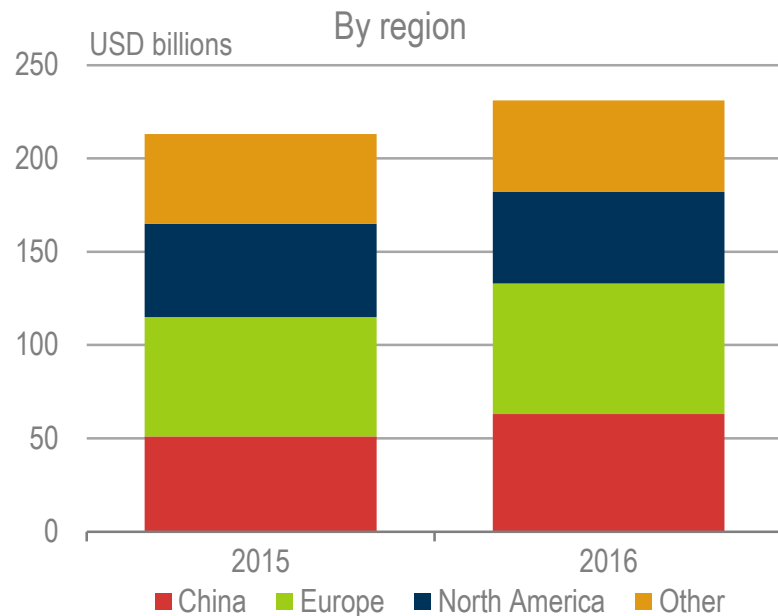
The impact of efficiency in the US has been significant



Without energy efficiency improvements since 2000, energy use in the United States would have been 16% higher

Energy efficiency investment is growing

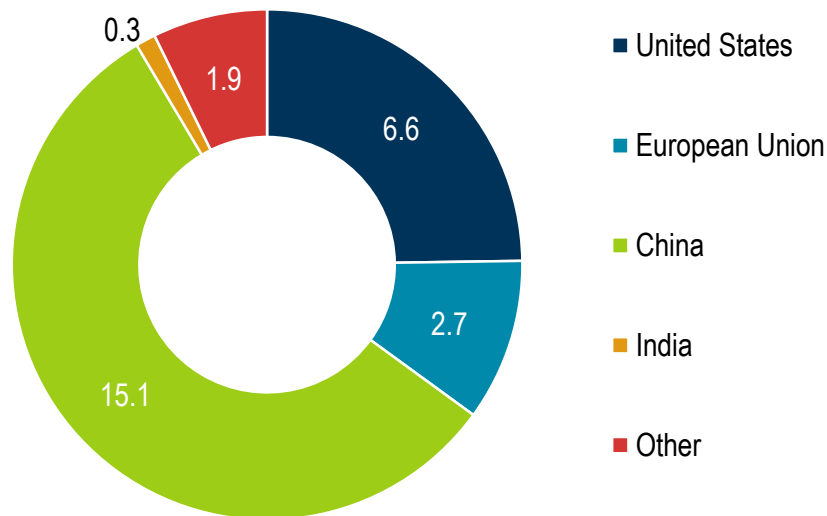
Energy efficiency investment by region and sector



**Energy efficiency investment grew 9% in 2016, with growth strongest in China.
The buildings sector continues to dominate global investment**

The ESCO market grew in 2016, led by China's industry sector

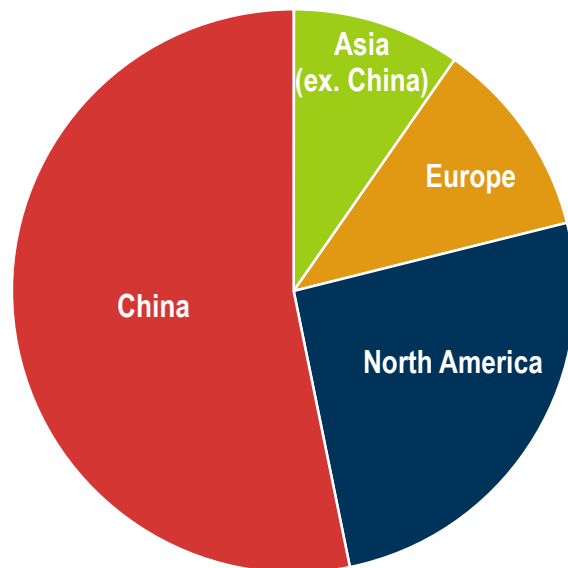
ESCO revenue by region, 2016



Total revenues of ESCOs reached USD 26.5 billion in 2016, up 10% from 2015. China has the world's largest ESCO market, with revenue of more than USD 15.1 billion in 2016.

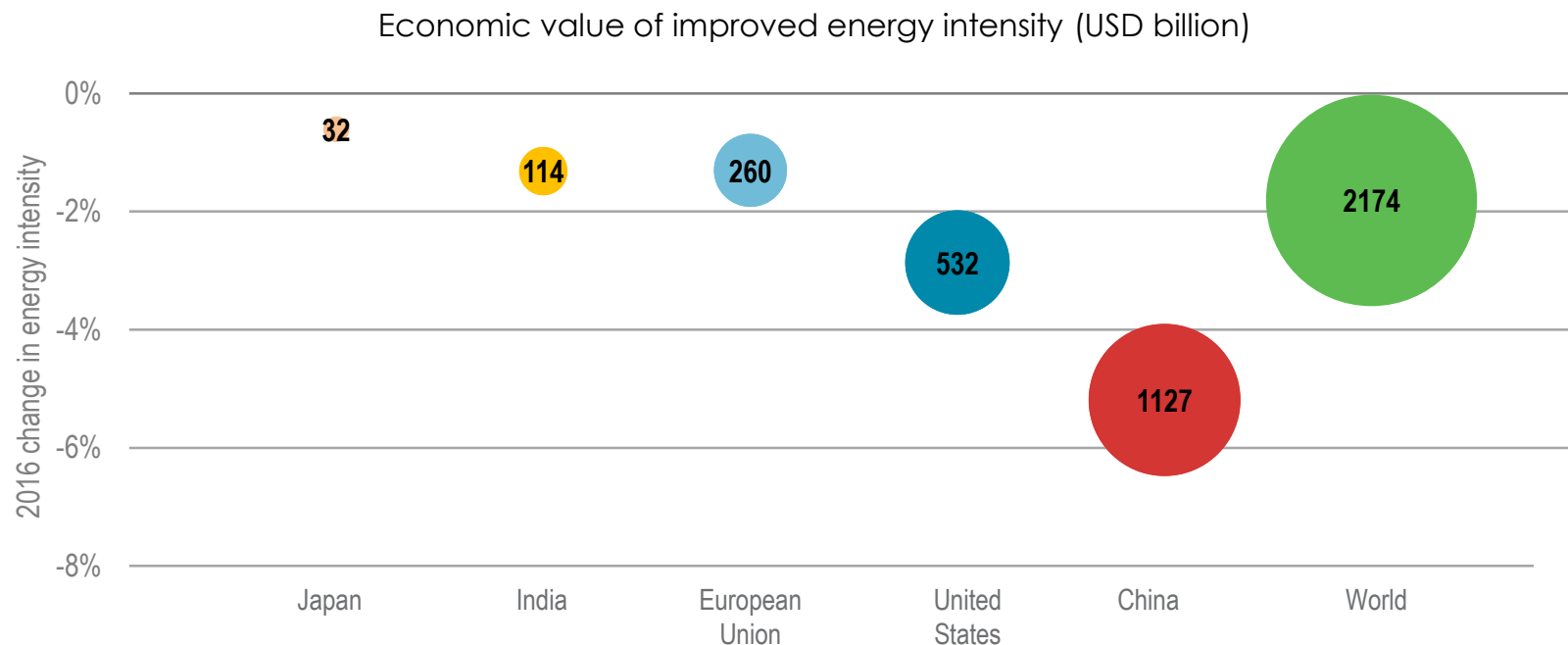
Globally, policy progress has been driven by China

Contribution to global Efficiency Policy Progress, 2000-16



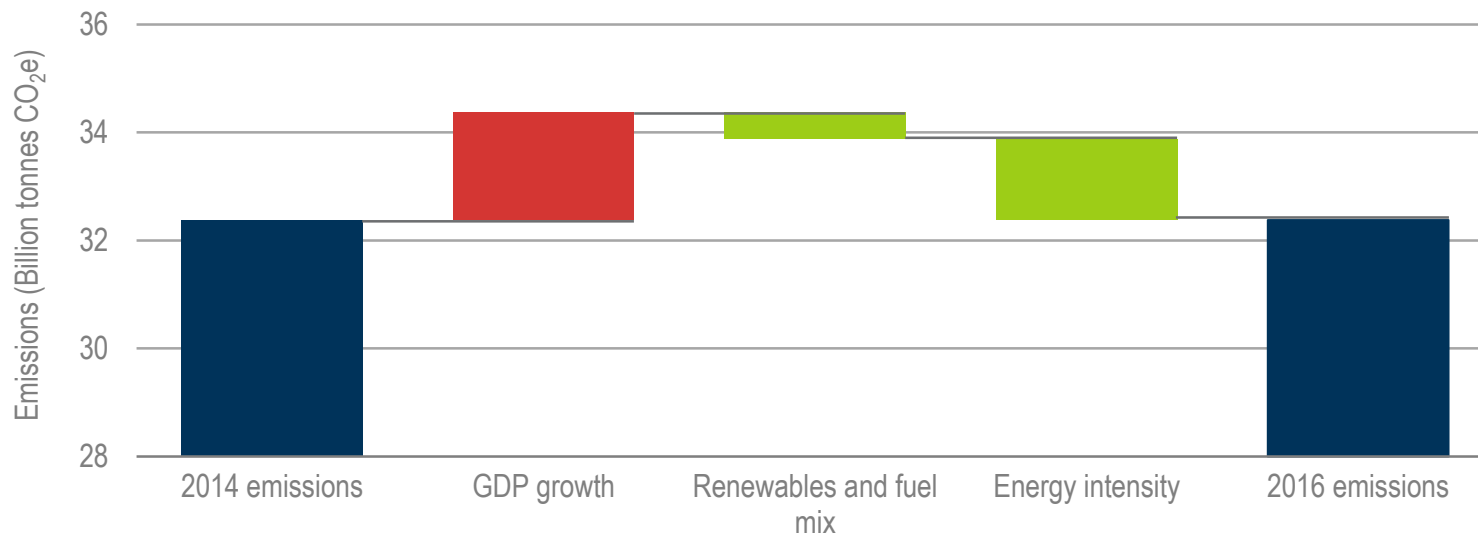
Without China, global energy efficiency policy progress would be less than half

Efficiency delivers a global energy productivity bonus



The 2016 intensity improvement represents an additional USD 2.2 trillion of value created from global energy use, equivalent to twice the size of the Australian economy.

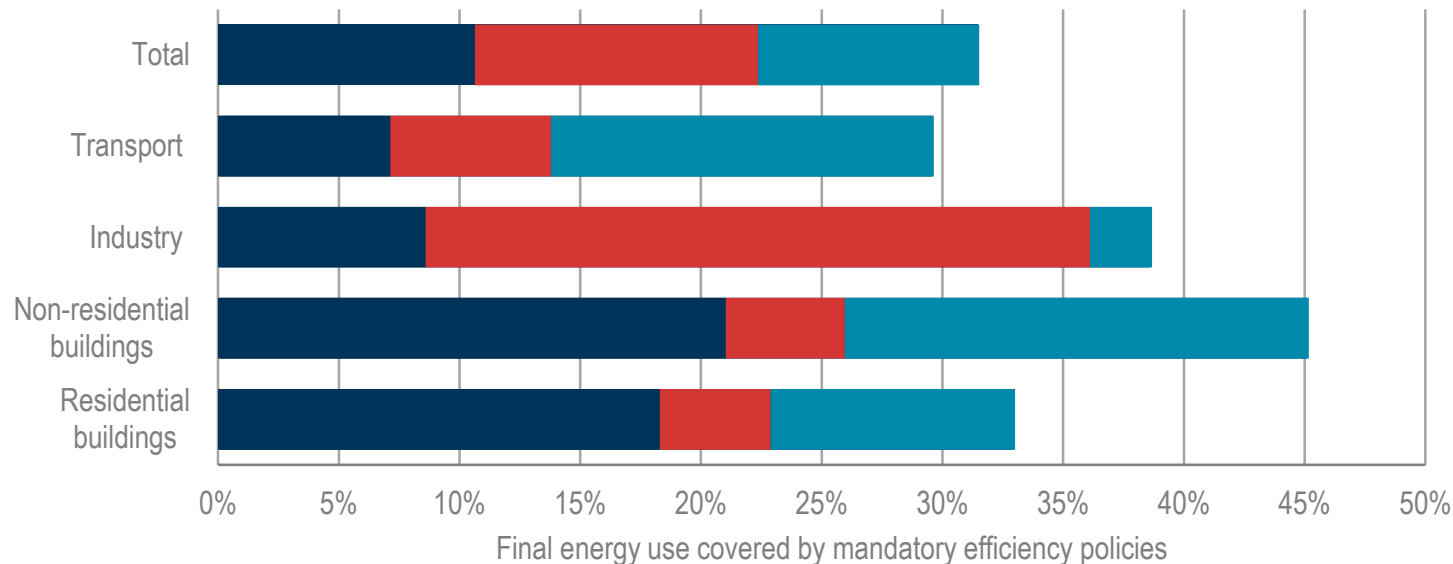
Factors influencing greenhouse gas emissions, 2014-16



Emissions would have been 2 billion tonnes higher in 2016 without the combination of energy efficiency improvement and the move towards renewables and cleaner fuels.

Over 68% of global final energy use remains uncovered

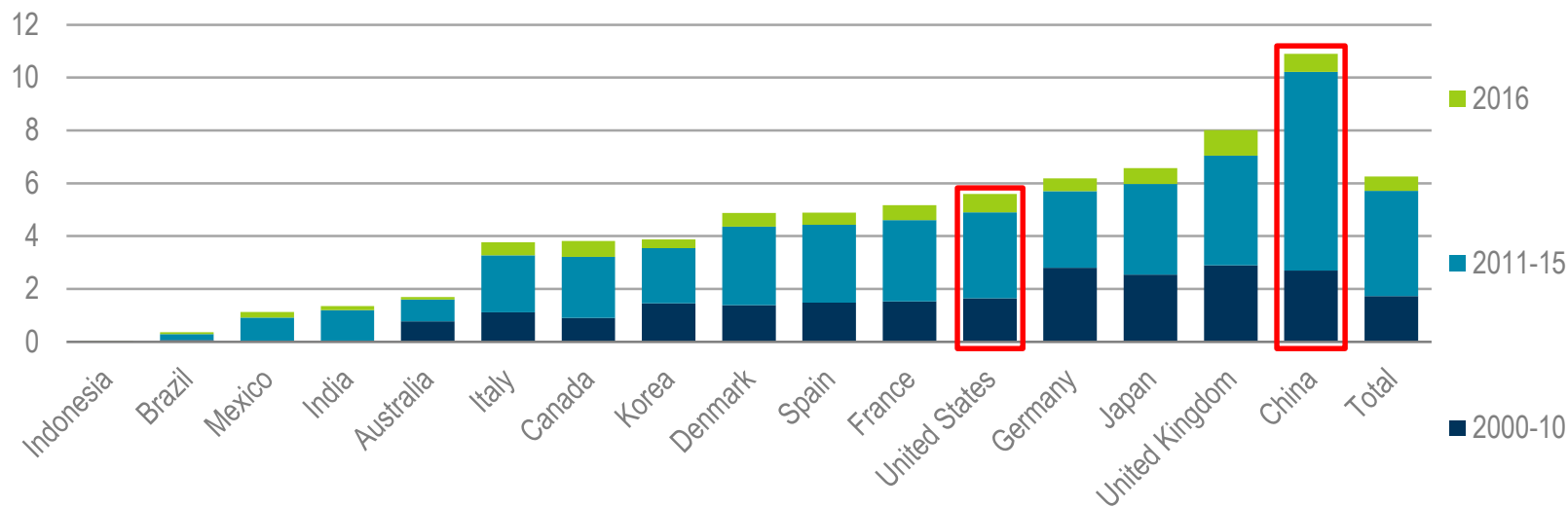
Percentage of sector final energy use covered by mandatory efficiency codes and standards



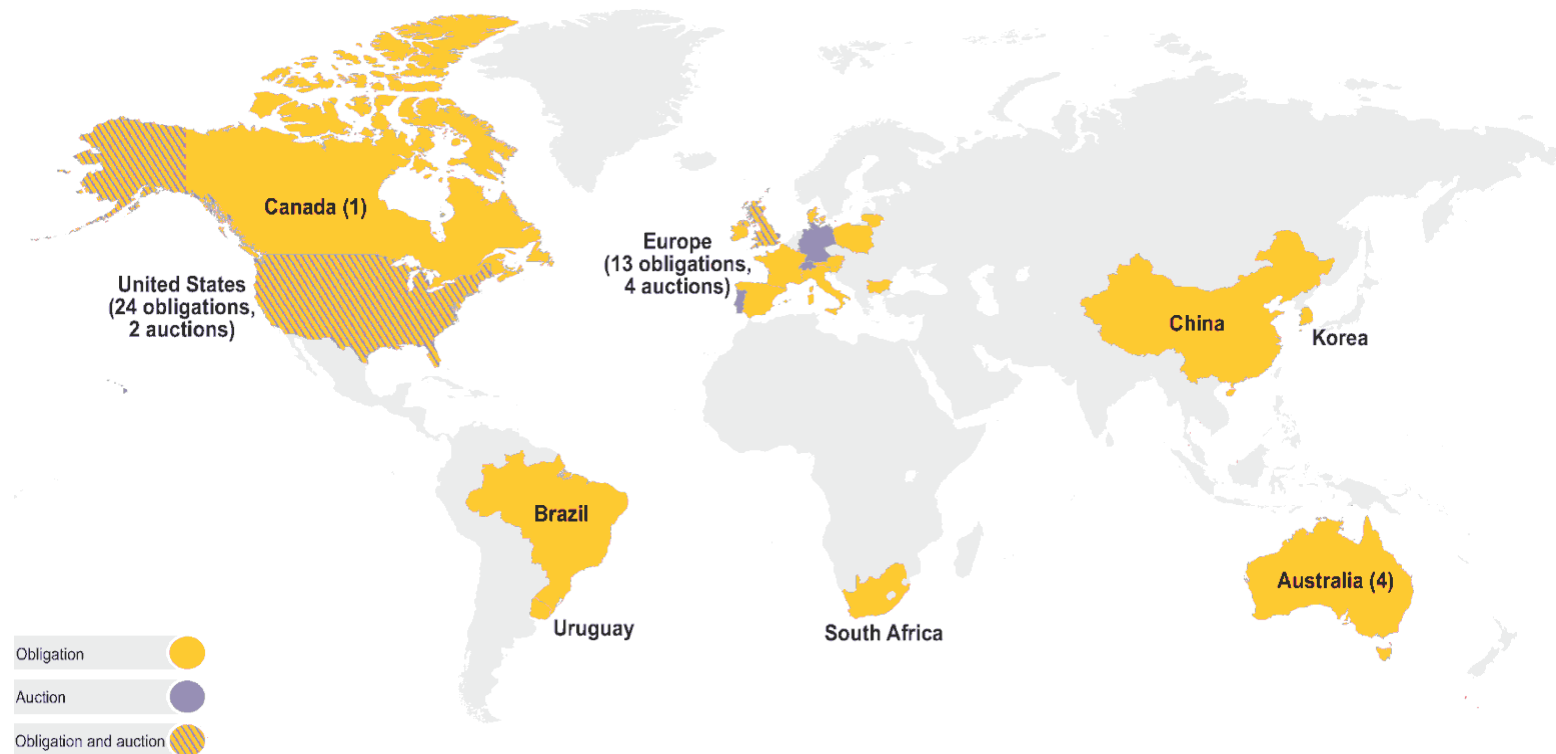
By the end of 2016, nearly 32% of global energy use was covered by mandatory efficiency policies. China and the United States represent the majority of coverage in nearly all sectors.

Policy progress varies across countries

IEA Efficiency Policy Progress Index (EPPI), 2000-2016



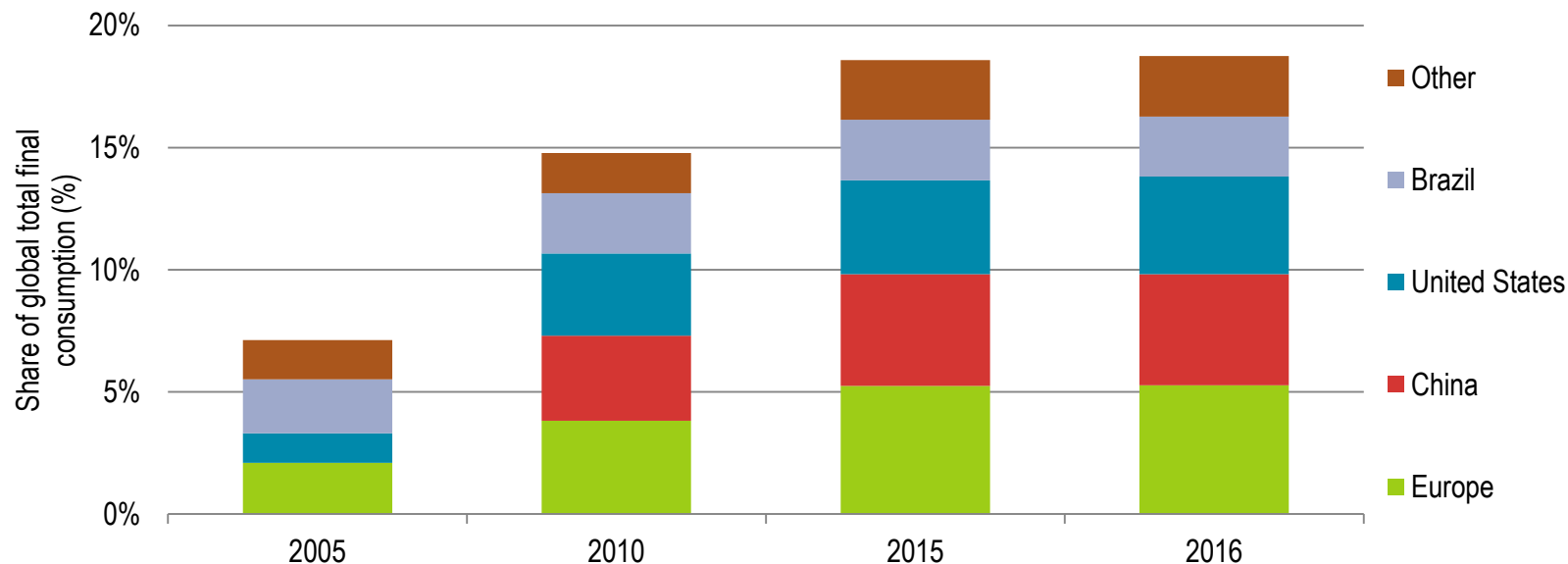
The total index in 2016 was 6.3, meaning codes and standards implemented since 2000 are designed to improve the minimum energy efficiency performance across the 16 countries by 6.3% relative to 2000.



The number of market-based instruments has quadrupled over the last decade, reaching six continents.

An increasing proportion of energy utilities' sales are covered by obligations

Coverage of energy utility obligations, 2016



The percentage of global final energy use covered by obligation programmes rose from 7% in 2005 to 19% in 2016.

- *Energy Efficiency 2017* shows the critical importance of energy efficiency to economies, households and the environment.
- There has been a step up in efficiency gains in recent years, despite lower energy prices, and this is having many positive impacts.
- USA and China are both world leaders in efficiency action
- However, 68% of global energy use remains uncovered by mandatory efficiency policy and the current low rate of policy implementation needs to accelerate.
- The IEA is attacking the unmet energy efficiency potential by facilitating knowledge sharing and providing concrete policy recommendations.



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